

LAWLER, METZGER, MILKMAN & KEENEY, LLC

2001 K STREET, NW
SUITE 802
WASHINGTON, D.C. 20006

RUTH MILKMAN
PHONE (202) 777-7726

PHONE (202) 777-7700
FACSIMILE (202) 777-7763

December 6, 2006

Via Electronic Filing

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

Re: WT Docket Nos. 96-86, 06-150 and 06-169
Ex Parte Notice

Dear Ms. Dortch:

On December 5, 2006, Andrew Rein, Stagg Newman and the undersigned on behalf of Access Spectrum, LLC, and Cheryl Crate, Paul Kolodzy and Kathy Wallman on behalf of Pegasus Communications Corporation met with Ronald Chase, Ira Keltz, Julius Knapp, and Geraldine Matise of the Office of Engineering and Technology and Ronald Repasi of the Public Safety & Homeland Security Bureau. During the meeting, Access Spectrum and Pegasus urged the Commission to adopt the Broadband Optimization Plan and the Commercial 700 MHz Plan proposals in the above-referenced proceedings. The enclosed slides were discussed during the meeting.

Pursuant to the Commission's rules, this letter is being submitted for inclusion in the public record in the above-referenced proceedings.

Sincerely,

/s/ Ruth Milkman
Ruth Milkman

Enclosure

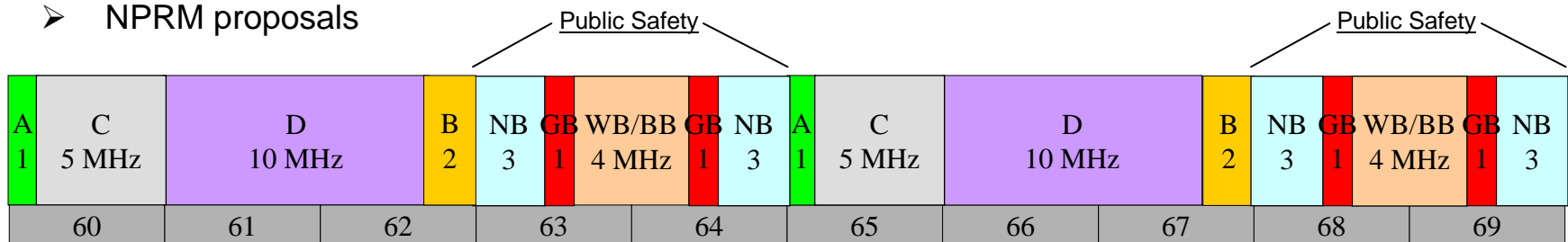
cc: Ronald Chase
Ira Keltz
Julius Knapp
Geraldine Matise
Ronald Repasi

**Optimizing the Upper 700 MHz Band:
Office of Engineering & Technology**

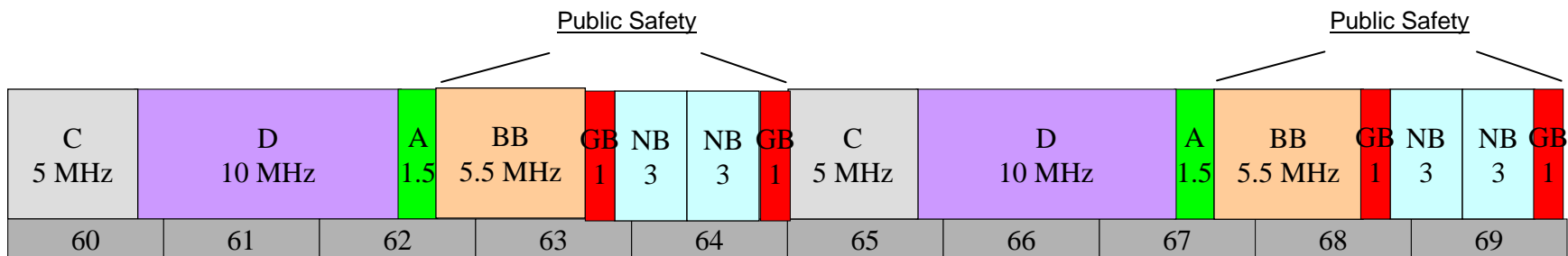
December 5, 2006

Re-configuring the public safety allocation

➤ NPRM proposals



➤ The Broadband Optimization Plan



- Consolidate the narrowband spectrum at the top of the public safety allocation
- Contribute three of the four MHz from the B Block to public safety for internal guard bands used to separate narrowband/wideband from public safety and/or commercial broadband
- Contribute the remaining one MHz from the B Block to the A Block, move the A Block to the lower end of the public safety block and ensure cooperative technical rules are in place to foster public-private partnerships and enable fully viable commercial broadband operations throughout the commercial allocation

The Broadband Optimization Plan: status

➤ Status

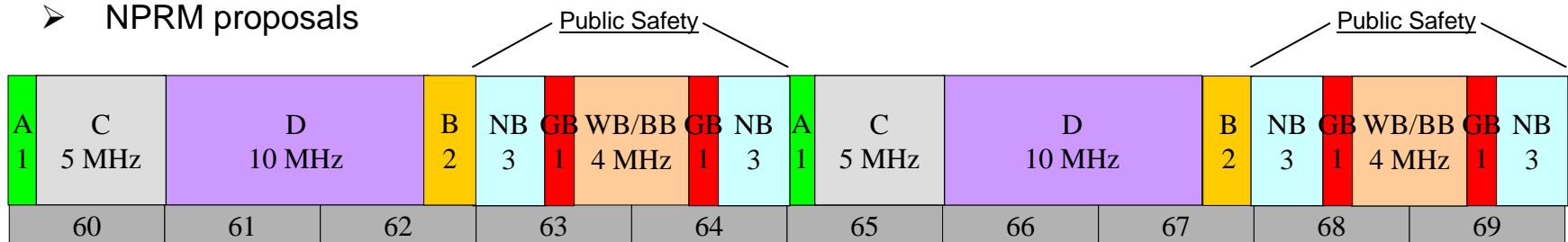
- The major technical issues related to public safety's consolidation of its narrowband allocation have been addressed
- Consensus has been developed among major public safety associations (NPSTC, APCO, IACP, IAFC, NARPC), regional planning committees and other public safety entities (e.g., the State of New York)
- There is considerable commercial support (Intel, Motorola, Northrop Grumman)

➤ Proponents of the Broadband Optimization Plan

- Currently working to finalize recommendations regarding technical rules governing the interface between public safety and commercial broadband operations in such as way as to
 - Protect public safety operations
 - Facilitate public-private partnerships
 - Ensure fully viable commercial broadband throughout the commercial allocation

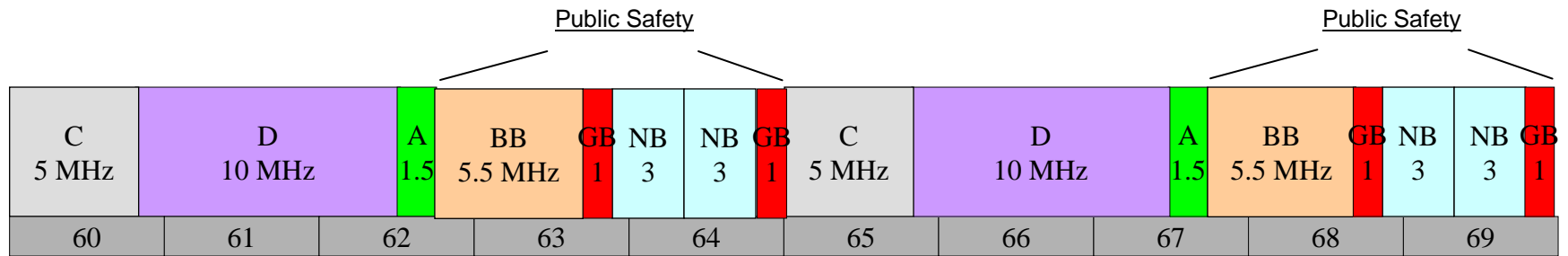
The status quo

➤ NPRM proposals



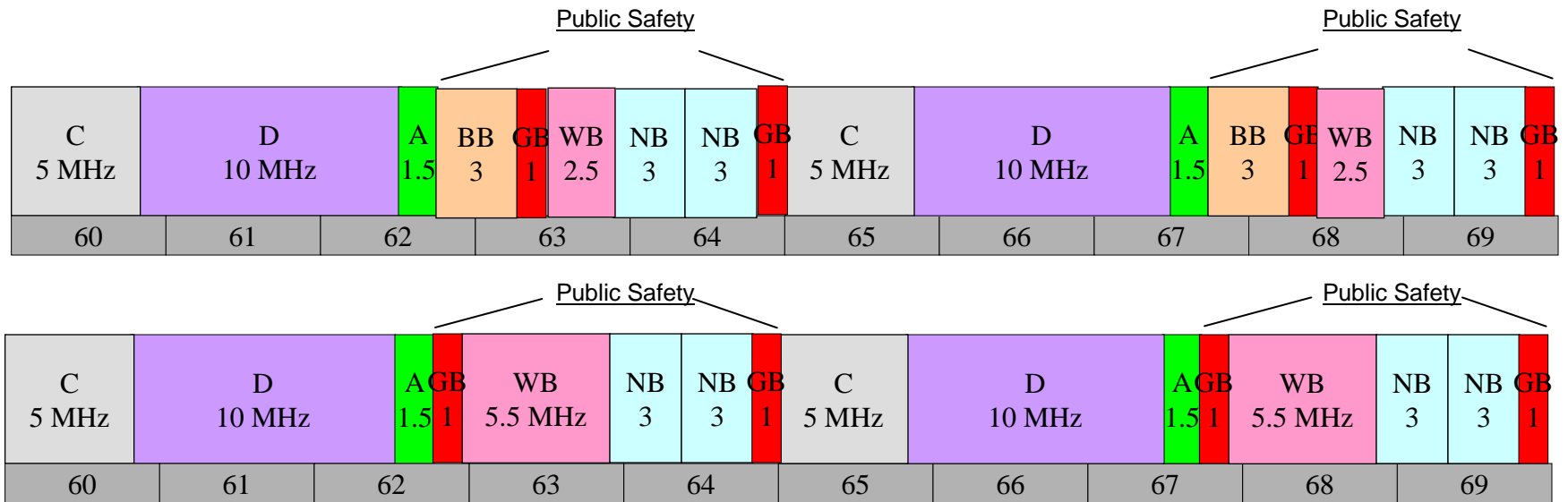
- The guard band concept, including the prohibition on cellular architecture, was designed with the current band plan in mind
 - At the upper edge of the public safety allocation, a 1 MHz guard band was set in place to protect public safety narrowband from commercial services
 - At the lower edge of the public safety allocation, a 2 MHz guard band was set in place as opposed to a 1 MHz block and thus aligned the blocks with the TV channels

The Broadband Optimization Plan



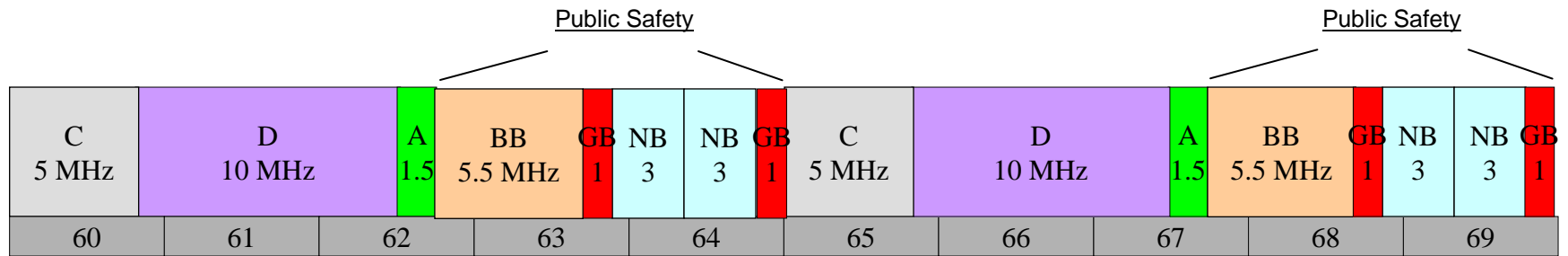
- The Broadband Optimization Plan, *at the very least*, preserves the status quo for protecting the public safety narrowband allocation at the upper edge of the public safety narrowband allocation
 - There is no need for a commercial guard band at the upper edge of the public safety allocation as public safety narrowband will receive as much or more protection as it enjoys today
 - Consolidating the narrowband allocation will in the future permit tighter filters on the public safety radios which will make them more resistant to interference
- At the lower edge of the public safety narrowband allocation, there is a 1 MHz guard band to protect public safety narrowband from public safety's own broadband

The Broadband Optimization Plan (cont'd)



- In the event public safety chooses to deploy wideband networks, they too will have adequate protection, as there will be a 1 MHz guard band separating public safety wideband from commercial or public safety broadband

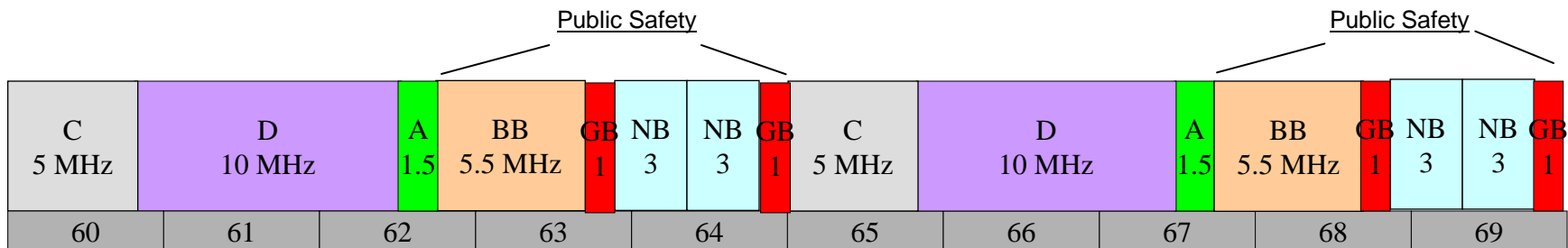
The Broadband Optimization Plan (cont'd)



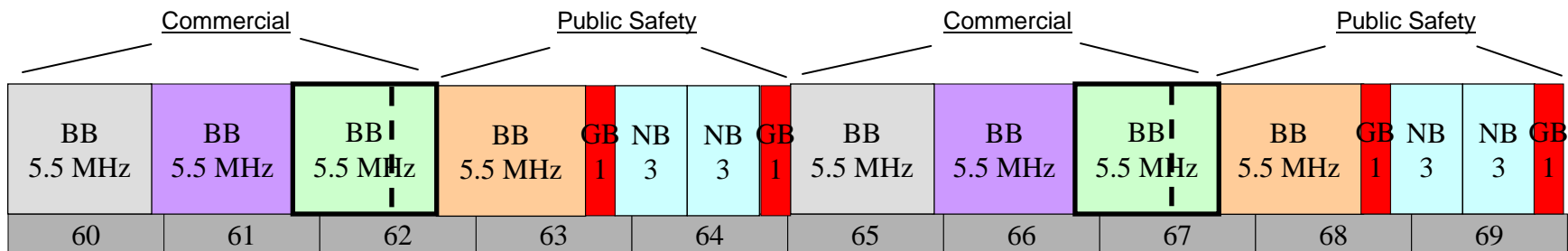
- However, public safety broadband will be directly adjacent to commercial broadband, a situation that requires coordination but also creates significant opportunities
 - Currently working to finalize recommendations regarding technical rules governing the interface between public safety and commercial broadband operations in such a way as to
 - Protect public safety operations
 - Facilitate public-private partnerships
 - Ensure fully viable commercial broadband throughout the commercial allocation

Reconfiguring the commercial allocation

➤ The Broadband Optimization Plan



➤ The Commercial 700 MHz Plan



- Re-organize 16.5 MHz of paired commercial spectrum into 5.5 MHz “building blocks” to ensure operators have multiple technology choices and to harmonize the commercial and public safety allocations to enable public safety to benefit from economies of scale
- Issue auction rules (i.e., “package bidding”) that enable the aggregation of spectrum blocks and geographic areas to ensure substantial and viable deployments and to prevent “blockers” from discouraging new entrants
- Create bidding preference for auction winners of the spectrum adjacent to the public safety allocation in exchange for allowing public safety free access to their infrastructure that is worth more than \$6 billion to the public safety community

The Commercial 700 MHz Plan

- Enhances U.S. broadband development and promotes U.S. global leadership by maximizing technology options, usable capacity and spectral efficiency
 - 5.5 MHz “building blocks” maximize the capacity available for use for all of the leading broadband technologies
- Facilitates the emergence of substantial and viable new entrants by using well-crafted auction rules such as package bidding to enable the market to determine the highest and best use for the spectrum
- Leverages commercial deployment to lower costs for the public safety community by
 - Harmonizing the commercial and public safety allocations to enable public safety to benefit from commercial economies of scale
 - Creating cooperative technical rules to foster the development of public-private partnerships
 - Conferring a benefit worth more than \$6B on the public safety community by providing incentives for commercial operators to grant public safety free access to their network infrastructure as well as priority access in times of emergency

The Commercial 700 MHz Plan (cont'd)

- Technology flexibility – 5.5 MHz “building blocks” are at least neutral and in most cases superior to 5 MHz for all available wireless broadband technologies
 - EvDO (CDMA 2000) – 5.5 MHz blocks enable the use of four 1.25 MHz carriers instead of three leading to 33% more usable capacity
 - OFDM technology (WiMAX, FLASH-OFDM, next-generation 3G technologies – LTE,UMB)
 - scalable technology will take advantage of the additional spectrum leading to an 11% increase in usable capacity
 - OFDM operators are currently utilizing 5.5 MHz channels at 2.5 GHz
 - W-CDMA – 5.5 MHz blocks do not permit additional usable capacity, but will reduce the equipment and engineering costs of filters
 - 16.5 MHz of spectrum would permit the use of four W-CDMA carriers instead of the three which are possible in a 15 MHz block
- Reduced cost of deployment – 5.5 MHz “building blocks” will reduce the cost of deploying wireless broadband networks leading to better quality of service and lower prices
 - Infrastructure expenses divided by a larger number of users – lower cost/user
 - Additional carriers/capacity reduces the total cost and the pace of the network build-out
 - This is of particular importance at 700 MHz due to its propagation characteristics

The Commercial 700 MHz Plan (cont'd)

- Spectral efficiency – 5.5 MHz “building blocks” optimize the spectrum available in the Upper 700 MHz band
 - Status quo (NPRM proposals)
 - Guard bands – 10 of the 60 MHz in the Upper 700 MHz band dedicated to guard bands
 - Commercial allocation – C&D Blocks would allow ten 1.25 MHz pairs, requiring the use of two full 1.25 MHz pairs as “buffers”
 - In total, ~15 of the 60 MHz of spectrum (25%) under-utilized
 - The Broadband Optimization Plan
 - Guard bands – 3 of the 60 MHz in the Upper 700 MHz band dedicated to guard bands
 - Commercial allocation – as with the status quo, the C&D Blocks would allow ten 1.25 MHz pairs, requiring the use of two full 1.25 MHz pairs as “buffers”
 - In addition, OFDM technologies would likely be confined to the 30 MHz of commercial spectrum instead of the full 33 MHz
 - In total, ~8 of the 60 MHz of spectrum (13%) is under-utilized
 - The Commercial 700 MHz Plan
 - Guard bands – 3 of the 60 MHz in the Upper 700 MHz band dedicated to guard bands
 - Commercial allocation – three 5.5 MHz blocks would allow twelve 1.25 MHz pairs
 - OFDM technologies would utilize the full commercial allocation
 - In total, only 3 of the 60 MHz of spectrum (5%) is under-utilized